

Work Order ID 73269



Page 1

Monday, August 29, 2011 1:28:27 PM

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 8/29/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 9/13/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: C2 Date: 11/08/29 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3492	C								
D3582	Rev A								

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D117-762-041 CHG001

N/A

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Folio 3,
use bending aid DT9632
2- cut fwd end of tube as per dwg

11-9-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC-Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Cut Aft end using DT8185

2-Deburr ends

3-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

4-Locate DT 8973 & Drill Ground wire hole on top of Tube.

5-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

6-Drill pilot holes for wearplates using DT8900

7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

8- open ground wear holes to 0.391" as per section B-B

9-Open Aft Cap holes using .209" drill.

10-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

DL
11/09/13

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 Skidtubes	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Weld fwd cap D2964 per dwg D3582 and QSI 004 A/R AL ROD Batch: <u>M112860</u> 2-Grind flush								
150 QC	QC10- Inspect visual per QSI004- ground welds	0.00							
Quality Control	Memo	0.00							
160 QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							

SG 11/09/13
OK 11/09/13

S 11/09/13

S 11/09/13

(X)

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Chemical Conversion Coat per-QSI005 4.1	0.00							
	HandFinish					1			DL
	Hand Finishing								11/09/15
	Memo	0.00							
180	QC3- Inspect Part Finish	0.00							
	QC					1	0		BE11/09/15
	Quality Control								
	Memo	0.00							

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex Batch: 118393

Exp. Date: 12/04/05

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD Batch: m112860

6-Grind welds flush DR, 11/09/19.

} DR 11/09/14

BE 11/09/19

200

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

S ulalzo

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 u/07/20

215

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Touch-up alodine as per QSI

IX Ø m/ 11/09/20

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME

OVEN TEMPERATURE:

FINISH TIME:

9:20
320 °F
9:50

IX Ø m/ 11/09/20

m 118439

W/O:		WORK ORDER CHANGES					
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Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230 QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 BR 11-9-20.

250 HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Inspect for Foreign objects

2-Install Aft cap as per Dwg D3582, Detail "C"

A/R 241 Sika Flex Batch: 118343

Exp Date: 12-5

3-Install Wearplates as per Dwg D3582,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582

*****Do not install bolts where indicated on Dwg(Note #6)*****

A/R 241 Sika Flex Batch: 118343

Exp Date: 12-5

4-assemble o'ring as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 118343

5- Wing Walk as per Dwg D3582 and QSI 005 4.4 118313.

1 BR 11-9-20

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
270	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D117-762-041								
	Location: _____								
	PPP Rev: _____								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

8/29/21

FD

PP 73956

11/9/2 28

11/9/27

MF 11-09-23

Picklist Print

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Page 1

Work Order ID: 73269

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube





Start Date: 8/29/2011

Required Date: 9/13/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A ☐ 07.06.11 ☐ New Issue ☐ EC
IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-11  Plug		Manufactured	No			250	Each	14.0000	2	2		BR 11-9-20.	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP		14							
				71863 ✓		14							
D3492-13  Plug		Manufactured	No			250	Each	23.0000	6	6		BR 11-9-20.	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP		20							
				71848 ✓		20							
				FP-B		3							
				46693		3							
D3492-9  Plug		Manufactured	No			250	Each	21.0000	2	2		BR 11-9-20.	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP-A		21							
				46694 ✓		21							
D2962-150  3.540 Outer Tube, Extrut		Manufactured	No				Each	60.0000		1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		60							
				59934		60							

① 11-9-12

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Replacement Skidtube

Start Date: 8/29/2011

Required Date: 9/13/2011

Start Qty: 1.00

Required Qty: 1.00

D2964

 Cap

Manufactured No

140 Each

7.0000

1 1



BE 11/09/13

Location

Loc Qty

Loc Code

LG002

7

64654

7

1

D2971

 Cross Bolt Spacer

Manufactured No

190 Each

2.0000

1 1



BE 11/09/13

Location

Loc Qty

Loc Code

LG001

2

44445

2

1

D3584-1

 Web

Manufactured No

190 Each

0.0000

1 1



Wk. 11/09/13

D2973

 Cross Bolt Spacer

Manufactured No

190 Each

94.0000

2 2



BE 11/09/13

Location

Loc Qty

Loc Code

LG002

94

14636

94

2

D3662-3

 Crossbolt Spacer

Manufactured No

190 Each

5.0000

1 1



BE 11/09/13

Location

Loc Qty

Loc Code

LG001

5

44456

5

1

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Required Date: 9/13/2011

Start Qty: 1.00

Required Qty: 1.00

D3662-1 Manufactured No

190 Each

40.0000

3

3



Crossbolt Spacer



BB 10/2/12

Location

Loc Qty

Loc Code

LG

40

71799

1

71857

37

72258

2

3

ALS4-1032-130 Purchased

No

Each

1,302.000

36



Insert

BL 11-9-20

Location

Loc Qty

Loc Code

ST281

370

118386

370

ST282

932

117717

54

118237

622

118312 ✓

256

36

ALS4-428-165 Purchased

No

Each

497.0000

2



Inserts

BL 11-9-20

Location

Loc Qty

Loc Code

FP

479

117769 ✓

479

FP-B

18

114172

18

2

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Start Qty: 1.00

Required Qty: 1.00

D2965
Cap, 105 Skidtube

Manufactured No

250 Each

34.0000

1 1



BL 11-9-20.

Location

Loc Qty

Loc Code

FP006

34

71371 ✓

34

1

D3508-3
Wearplate

Manufactured No

250 Each

9.0000

1 1



BL 11-9-20.

Location

Loc Qty

Loc Code

FP021

1

38527

1

FP21

8

72169 ✓

8

1

D3508-9
Wearplate

Manufactured No

250 Each

10.0000

1 1



BL 11-9-20.

Location

Loc Qty

Loc Code

FP21

10

72203 ✓

10

1

D3558-3
Gasket

Manufactured No

250 Each

8.0000

1 1



BL 11-9-20.

Location

Loc Qty

Loc Code

FP014

8

71651

1

72170 ✓

7

1

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Start Qty: 1.00

Required Qty: 1.00

D3558-9
Gasket

Manufactured No

250 Each

8.0000

1 1



BR 11-9-20.

Location

Loc Qty

Loc Code

FP014

8

71212 ✓

8

1

D3558-11
Gasket

Manufactured No

250 Each

9.0000

1 1



BR 11-9-20.

Location

Loc Qty

Loc Code

FP014

9

72202 ✓

9

1

D3558-13
Gasket

Manufactured No

250 Each

13.0000

1 1



BR 11-9-20.

Location

Loc Qty

Loc Code

FP014

13

59558 ✓

13

1

D3508-11
Wearplate

Manufactured No

250 Each

8.0000

1 1



BR 11-9-20.

Location

Loc Qty

Loc Code

FP016

8

72011 ✓

8

1

D3508-13
Wearplate

Manufactured No

250 Each

15.0000

1 1



BR 11-9-20.

Location

Loc Qty

Loc Code

FP016

15

71027 ✓

3

71794 ✓

12

1

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Start Qty: 1.00

Required Qty: 1.00

AN960JD10L NAS1149D0332J ☒ Purchased

No

250

Each

0.0000

2

2



117087



2

BK 11-9-20.

Washer

AN3C4A Purchased

No

250

Each

2,501.000

28

28



BK 11-9-20.

BOLT

Location

Loc Qty

Loc Code

ST350

2501

117313

2

117688

36

117795

1

117872

22

118012

20

118112

40

118451

1000

118628

880

118706

500

28.

AN3C5A Purchased

No

250

Each

1,261.000

2

2



BK 11-9-20.

Bolt

Location

Loc Qty

Loc Code

FP-A

7

115835

7

ST350

1254

116419

28

116549

30

117343

462

117764

222

117872

12

118451

500

2

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Monday, August 29, 2011 1:28:25 PM

Work Order ID: 73269

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 8/29/2011

Required Date: 9/13/2011

Start Qty: 1.00

Required Qty: 1.00

AN960JD416L NAS1149D0416J Purchased

No

250

Each

15.0000

2

2



Washer



BR 11-9-20

Location

Loc Qty

Loc Code

FP-B

15

110153 ✓

15

AN960C10L NAS1149C0332R Purchased

No

250

Each

0.0000

28

28



washer



2

28

BR 11-9-20

118354

AN4-4A Purchased

No

250

Each

58.0000

2

2



Bolt



BR 11-9-20

Location

Loc Qty

Loc Code

FP-B

20

114615 ✓

20

ST356

38

114615

38

NAS1611-012 Purchased

No

250

Each

78.0000

6

6



O-RING



2

BR 11-9-20

Location

Loc Qty

Loc Code

FP

68

118384 ✓

68

FP-A

10

113845

10

6

Monday, August 29, 2011 1:28:25 PM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Monday, August 29, 2011 1:28:25 PM

Work Order ID: 73269

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 8/29/2011

Required Date: 9/13/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1611-015

Purchased

No

250

Each

127.0000

2

2



O-RING



BR 11-9-20.

Location

Loc Qty

Loc Code

FP-A

127

115101

85

116081

42

2

NAS1611-016

Purchased

No

250

Each

80.0000

2

2



O-RING



BR 11-9-20.

Location

Loc Qty

Loc Code

FP-A

80

112492

54

113524

26

2

Monday, August 29, 2011 1:28:25 PM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

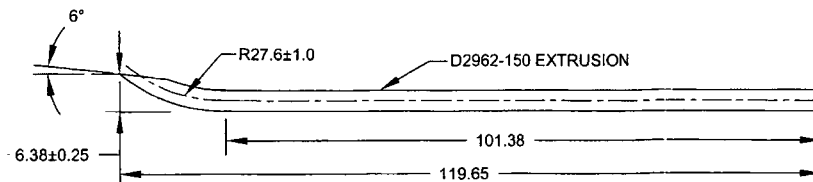
NOTE: Date & initial all entries

PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

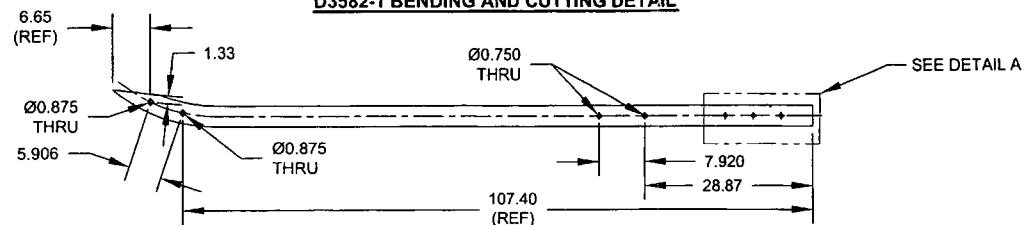
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

GENERAL NOTES:

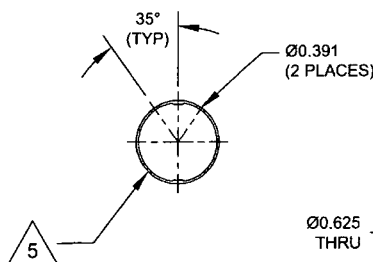
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
 - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
 - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



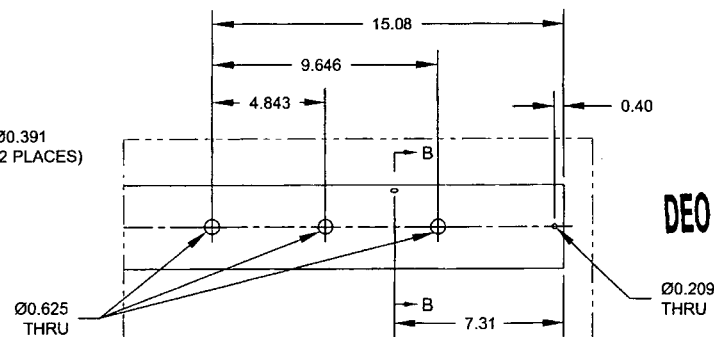
D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B
SCALE 1:5



DETAIL A
SCALE 1:5

DEO ATTACHED

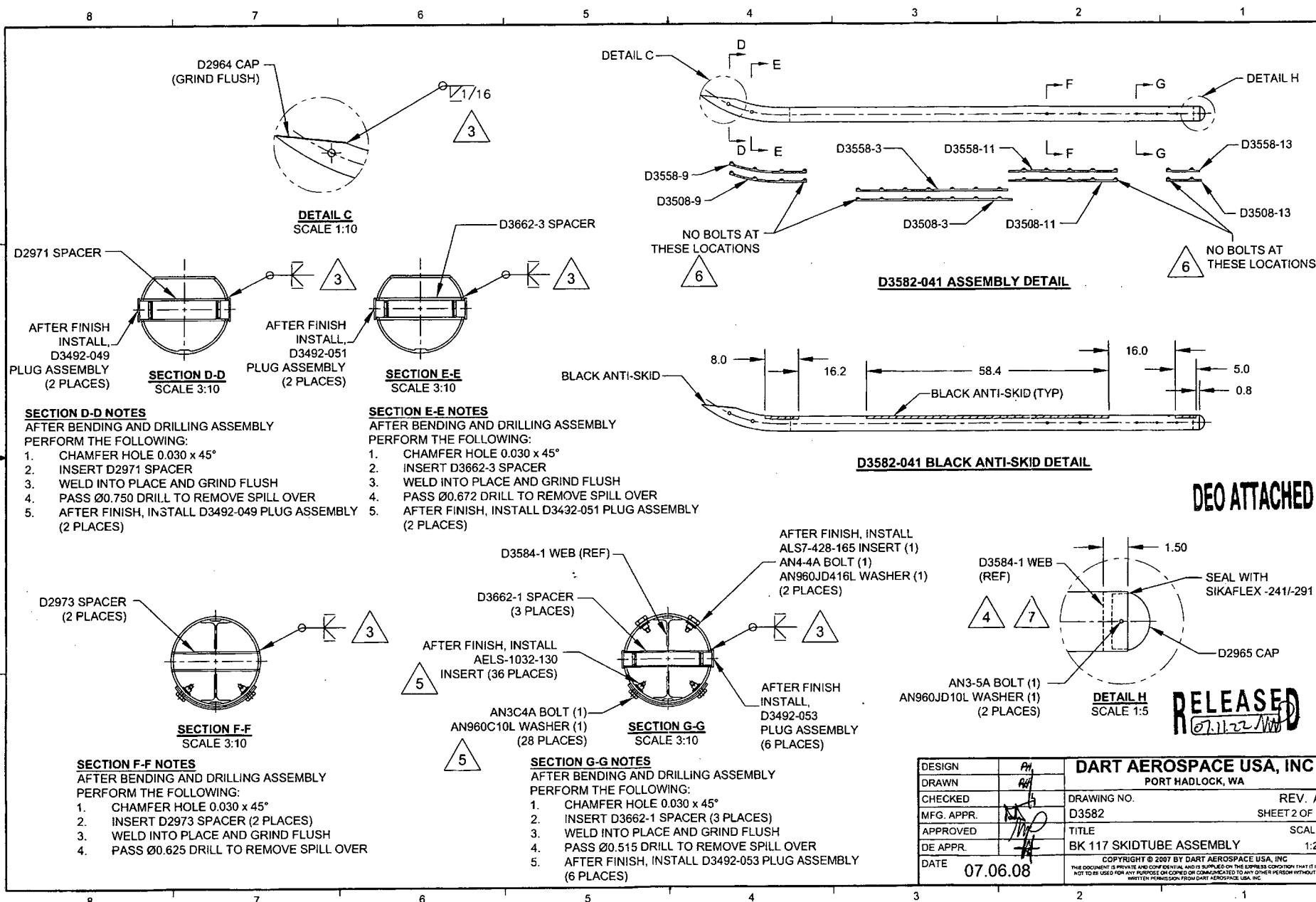
RELEASED
07.11.22

CL 11/08/29
W10:73269

A NEW ISSUE		PH	07.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	07.06.08		

DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWING NO. D3582	REV. A
TITLE BK 117 SKIDTUBE ASSEMBLY	SHEET 1 OF 2
SCALE 1:20	

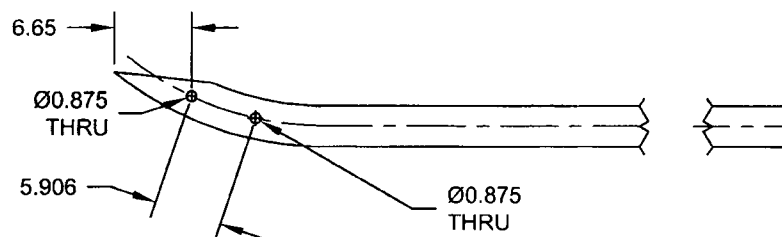
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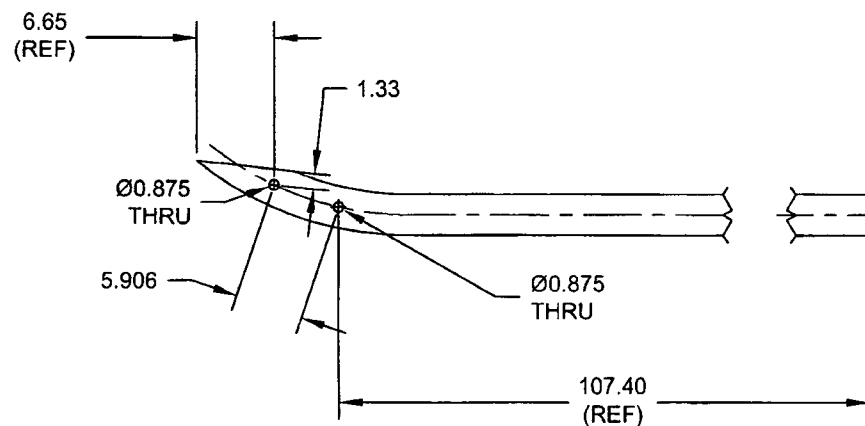
DRAWING NO. D3582	TITLE BK 117 SKIDTUBE ASSEMBLY	REV. A	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3582-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN PH	CHECKED B	MFG. APPR. E	APPROVED MD		DE APPR. MA		
DATE 09.04.06	DATE 04.04.06	DATE 09.04.06	DATE 12/04/06		DATE 09.04.06		

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

IS:



WAS:



RELEASED
09/04/22 MP

NO. 263

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: B72595
Part number: D117 762 041
Description: 117
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Pat Lewis Date of Test Coupon 11-08-17
Welder Barclay Elliott Date of Test Coupon 11-08-17

The above named individual is qualified in accordance with AWS D17.1.2001 to weld